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IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

PATENT APPLICATION

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Applicant: **Withers, et al.**

Case: **5646/CMP/CMP/RKK**

Serial No.: **09/921,588**

Filed: **August 2, 2001**

Examiner: **Shakeri, Hadi**

Group Art Unit: **3723**

Confirmation No.: **9496**

TITLE: MULTIPOINT POLISHING FLUID DELIVERY SYSTEM

Mail Stop Appeal Brief – Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SIR:

REPLY BRIEF

Applicants/Appellants, in accordance with 37 C.F.R. §1.193 and M.P.E.P. §1208.02 and in response to the Examiner's Answer dated February 24, 2004, hereby submit this Reply Brief to the Board of Patent Appeals and Interferences. Although Applicants/Appellants believe that no fee is due in conjunction with this response, the Commissioner is hereby authorized to charge any fees necessary to make this reply timely and acceptable, including extension of time fees under 37 C.F.R. §1.136, to Deposit Account No. 20-0782.

Applicants/Appellants submit the following remarks in response to the Examiner's Answer dated February 24, 2004, in further support of the arguments presented in the Applicants' principal brief filed on December 1, 2003. Specifically, Applicants/Appellants believe Examiner's Answer repeatedly mischaracterizes the teachings of *Kimura* and the desirability of any combination of the same with references having non-compatible teachings.

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The Examiner asserts, in column 2, lines 25-28, that *Kimura* teaches "supplying a polishing fluid having a common concentration to be diluted along a radial direction". See, Examiner's Answer at page 3, lines 14-20. The Applicants/Appellants disagree as each and every embodiment of *Kimura* describes a delivery arm that dispenses polishing fluid to create a distribution of polishing fluid on a polishing pad having different concentrations to effectuate control of the polishing rate. The claims presented in the present application recite a system wherein a first nozzle dispenses a greater volume of polishing fluid on a first portion of a polishing surface as it interfaces with a substrate than the polishing fluid of equal concentration dispensed on a second portion of the polishing surface by a second nozzle. Thus, the Examiner has ignored claim limitations that require the distribution of polishing fluid to have different concentrations at the interface between the polishing fluid and the substrate. *Kimura* specifically teaches that the concentration is varied across the width of the pad to enable profile control during polishing (e.g., the control rate of polishing). Moreover, the Examiner ignores the entire dispensing apparatus of *Kimura* that is configured to provide a polishing fluid having different concentrations across the pad. As an example, the Examiner is viewing only one of two dispense arms of the *Kimura* system that jointly operate to provide a polishing fluid distribution of varying concentration on the pad.

The Examiner continues to ignore the teachings of *Kimura* by suggesting a combination with *Nagahara* would result in the claimed subject matter. *Nagahara* teaches that polishing fluid is provided through a polishing pad at dissimilar flow rates. *Kimura* teaches that polishing fluid is provided to a polishing pad from an arm suspended over the pad, and that the polishing fluid is dispensed in a manner that yields a polishing fluid distribution of varied concentration across the pad. In response to the Examiner's assertion that the dissimilar flow rates of *Nagahara* may be utilized to modify the teachings of *Kimura*, the Applicants/Appellants maintain the assertion that any combination of *Kimura* with *Nagahara* requires the resultant polishing fluid to have different concentrations across the pad, as *Kimura* specifically teaches that the primary control of the polishing profile is by varying the concentration of the polishing fluid

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across the diameter of the pad. Therefore, the Examiner is mischaracterizing *Kimura* by asserting that *Kimura* may be modified using dissimilar flow rates to yield a system distributing polishing fluid of the same concentration defined where the polishing fluid interfaces with the substrate. To allege that *Kimura* could provide a distribution of polishing fluid having equal concentration on a polishing pad would be to completely ignore the stated goals and objectives of *Kimura*.

The Examiner's assertion that the "distribution of different concentrations of polishing solution may also be obtained by adjusting the flow rates" is not relevant to a system that provides polishing fluid having the same concentration, as claimed by the Applicants/Appellants. As noted above, *Kimura* specifically teaches to vary the concentration of polishing fluid across the pad, thus teaching away from the claimed invention.

With regard to the other assertions by the Examiner, the Applicants/Appellants submit that the arguments presented in the primary brief address the assertions, and accordingly, the Applicants/Appellants have omitted specific rebuttals for the sake of brevity.

CONCLUSION


Applicants/Appellants submit that the cited references, alone or in combination, fail to teach, show, or suggest each of the elements or limitations expressly recited in Applicants'/Appellants' claims. More particularly, none of the cited references teach the claimed subject matter as discussed in the primary brief. Therefore, Applicants/Appellants respectfully request the Board's reconsideration and reversal of the Examiner's rejection of claims 1-27 and 30-39 in view of the arguments presented

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herein and in the primary brief.

Respectfully submitted,

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Keith P. TABOADA,
Attorney Reg. No. 45,150
(732) 530-9404

Moser, Patterson & Sheridan, LLP
595 Shrewsbury Avenue
Suite 100
Shrewsbury, NJ 07702

CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. 1.8

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Allyson M. DeVesty
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4-23-04
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